

WHAT IS CLAIMED IS:

- 1                   1.     An isolated polypeptide, wherein said polypeptide is from about 5  
2     to about 71 amino acids in length and comprises a contiguous amino acid sequence  
3     DX<sub>1</sub>CX<sub>2</sub>D; wherein X<sub>1</sub> and X<sub>2</sub> are selected from the group consisting of amino acids.
- 1                   2.     The isolated polypeptide of claim 1, wherein X<sub>1</sub> is a valine or a  
2     conservatively modified variant thereof.
- 1                   3.     The isolated polypeptide of claim 1, wherein X<sub>2</sub> is a glutamine or a  
2     conservatively modified variant thereof.
- 1                   4.     The isolated polypeptide of claim 1, wherein said polypeptide  
2     comprises the contiguous amino acid sequence DVCQD.
- 1                   5.     The isolated polypeptide of claim 1, wherein said peptide is a  
2     peptidomimetic of DX<sub>1</sub>CX<sub>2</sub>D, wherein X<sub>1</sub> and X<sub>2</sub> are selected from the group consisting  
3     of amino acids.
- 1                   6.     The isolated polypeptide of claim 1, wherein said polypeptide  
2     specifically binds to an antibody raised against Saposin B.
- 1                   7.     The isolated polypeptide of claim 1, wherein said polypeptide  
2     comprises an amino acid sequence substantially identical to that shown in SEQ ID NO:1  
3     beginning at position 7.
- 1                   8.     The isolated polypeptide of claim 1, wherein said polypeptide  
2     comprises at least 5 contiguous amino acids, or conservatively modified variants thereof,  
3     said contiguous amino acids having an amino acid sequence as shown in SEQ ID NO:1,  
4     beginning at position 7.
- 1                   9.     The isolated polypeptide of claim 1, wherein said polypeptide  
2     comprises R-DVCQD-R'; wherein R is from 0 to about 6 contiguous amino acids; and  
3     wherein R' is from 0 to about 59 contiguous amino acids.
- 1                   10.    The isolated polypeptide of claim 1 wherein said polypeptide is  
2     glycosylated.

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1 11. The isolated polypeptide of claim 1, wherein said polypeptide .  
2 comprises R-XDVCQD-R'; wherein R is selected from the group consisting of  
3 Aa<sub>1</sub>-Aa<sub>2</sub>-Aa<sub>3</sub>-Aa<sub>4</sub>-Aa<sub>5</sub>, Aa<sub>2</sub>-Aa<sub>3</sub>-Aa<sub>4</sub>-Aa<sub>5</sub>, Aa<sub>3</sub>-Aa<sub>4</sub>-Aa<sub>5</sub>, Aa<sub>4</sub>-Aa<sub>5</sub> and Aa<sub>5</sub>, and wherein  
4 Aa<sub>1</sub>, Aa<sub>2</sub>, Aa<sub>3</sub>, Aa<sub>4</sub> and Aa<sub>5</sub> are selected from the group consisting of amino acids; X is  
5 selected from the group consisting of G, A, S and T; and wherein R' is from 0 to about 59  
6 contiguous amino acids.

1 12. The isolated polypeptide of claim 11, wherein Aa<sub>1</sub> is a glutamine or  
2 a conservative substitution thereof.

1 13. The isolated polypeptide of claim 11, wherein Aa<sub>2</sub> is a proline or a  
2 conservative substitution thereof.

1 14. The isolated polypeptide of claim 11, wherein Aa<sub>3</sub> is a lysine or a  
2 conservative substitution thereof.

1 15. The isolated polypeptide of claim 11, wherein Aa<sub>4</sub> is an aspartic  
2 acid or a conservative substitution thereof.

1 16. The isolated polypeptide of claim 11, wherein Aa<sub>5</sub> is a asparagine  
2 or a conservative substitution thereof.

1 17. The isolated polypeptide of claim 11, wherein R' is selected from  
2 the group consisting of Aa<sub>12</sub>-Aa<sub>13</sub>-Aa<sub>14</sub>-Aa<sub>15</sub>-Aa<sub>16</sub>, Aa<sub>12</sub>-Aa<sub>13</sub>-Aa<sub>14</sub>-Aa<sub>15</sub>, Aa<sub>12</sub>-Aa<sub>13</sub>-Aa<sub>14</sub>,  
3 Aa<sub>12</sub>-Aa<sub>13</sub> and Aa<sub>12</sub>, wherein Aa<sub>12</sub>, Aa<sub>13</sub>, Aa<sub>14</sub>, Aa<sub>15</sub> and Aa<sub>16</sub> are selected from the group  
4 consisting of amino acids.

1 18. The isolated polypeptide of claim 17, wherein Aa<sub>12</sub> is a cysteine or  
2 a conservative substitution thereof.

1 19. The isolated polypeptide of claim 17, wherein Aa<sub>13</sub> is an isoleucine  
2 or a conservative substitution thereof.

1 20. The isolated polypeptide of claim 17 wherein Aa<sub>14</sub> is an glutamine  
2 or a conservative substitution thereof.

1 21. The isolated polypeptide of claim 17, wherein Aa<sub>15</sub> is an  
2 methionine or a conservative substitution thereof.

1 22. The isolated polypeptide of claim 17, wherein Aa<sub>16</sub> is a valine or a  
2 conservative substitution thereof.

1 23. The isolated polypeptide of claim 1, which has the amino acid  
2 sequence GDVCQDCIQMV.

1 24. An isolated protein, wherein said protein specifically binds to  
2 Saposin B and is found on the surface of cells selected from the group consisting of KS  
3 Y-1, SLK and HUVEC.

1 25. The isolated protein of claim 24, wherein said protein is  
2 recombinantly expressed.

1 26. An antibody that is specifically reactive with the isolated  
2 polypeptide of claim 1.

1 27. The antibody of claim 26, wherein said monoclonal antibody is a  
2 monoclonal antibody.

1 28. The antibody of claim 26, wherein said antibody is a single chain  
2 antibody.

1 29. A method of treating a mammal, wherein said organism has a  
2 pathological condition associated to undesired angiogenesis, by administering an amount  
3 of an isolated polypeptide comprising a contiguous amino acid sequence DX<sub>1</sub>CX<sub>2</sub>D,  
4 wherein X<sub>1</sub> and X<sub>2</sub> are selected from the group consisting of amino acids, and said  
5 polypeptide has antiangiogenic activity, and wherein said amount of polypeptide is  
6 effective to reduce angiogenesis.

1 30. The method of claim 29, wherein the mammal is human.

1 31. The method of claim 29, wherein said pathological condition is  
2 cancer.

1 32. The method of claim 31, wherein said cancer is Kaposi's Sarcoma.

1 33. The method of claim 29, wherein administration is selected from  
2 the group consisting of subcutaneous, intramuscular, intravenous, intra-arterial,  
3 intrabronchial, oral, transdermal, intraocular, rectal, vaginal, intranasal, sublingual and  
4 intralesional.

1 34. The method of claim 33, wherein the administration is selected  
2 from the group consisting of intralesional and transdermal.

1 35. The method of claim 29, wherein said isolated polypeptide is  
2 Saposin B.

1 36. The method of claim 29, wherein said therapeutic amount is from  
2 about 0.1 mg/kg to about 20 mg/kg.

1 37. A pharmaceutical composition in unit dosage form, which  
2 comprises:

3 (a) one or more pharmaceutically acceptable excipients,

4 (b) an amount of a polypeptide comprising a contiguous amino acid  
5 sequence  $DX_1CX_2D$ , wherein  $X_1$  and  $X_2$  are selected from the group consisting of amino  
6 acids; and

7 wherein the polypeptide is effective to treat or prevent undesired  
8 angiogenesis in an animal or patient to whom one or more unit doses of said composition  
9 are administered.

1 38. The pharmaceutical composition of claim 37, wherein said unit  
2 dosage form is an aseptic solution comprising said polypeptide.

1 39. The pharmaceutical composition of claim 37, wherein said unit  
2 dosage form is a topical ointment.

1 40. An isolated fusion protein, said fusion protein comprising a  
2 polypeptide of a contiguous amino acid sequence  $DX_1CX_2D$ , wherein  $X_1$  and  $X_2$  are

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3 selected from the group consisting of amino acids, and a cell targeting moiety; wherein  
4 said cell targeting moiety and said polypeptide have functional activity independent of  
5 each other.

1 41. The isolated fusion protein of claim 40, wherein said cell targeting  
2 moiety is a protein.

1 42. The isolated fusion protein of claim 40, wherein said protein is an  
2 antibody.

1 43. The isolated fusion protein of claim 42, wherein said antibody is a  
2 monoclonal antibody.

1 44. The isolated fusion protein of claim 43, wherein said antibody is a  
2 single chain Fv antibody.

1 45. An isolated fusion protein, said fusion protein comprising a  
2 polypeptide of a contiguous amino acid sequence  $DX_1CX_2D$ , wherein  $X_1$  and  $X_2$  are  
3 selected from the group consisting of amino acids, and a cytotoxic moiety; wherein said  
4 cell targeting moiety and said polypeptide have functional activity independent of each  
5 other.

1 46. The isolated fusion protein of claim 45, wherein said cytotoxic  
2 moiety is a protein.

1 47. The isolated fusion protein of claim 45, wherein said protein is a  
2 bacterial toxin.

1 48. The isolated fusion protein of claim 47, wherein said bacterial  
2 toxin is from Diphtheria.

1 49. The isolated fusion protein of claim 48, wherein said bacterial  
2 toxin is the B chain of Diphtheria toxin.

1 50. The isolated fusion protein of claim 47, wherein said bacterial  
2 toxin is from Pseudomonas.

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1 51. The isolated fusion protein of claim 50, wherein said bacterial  
2 toxin is *Pseudomonas* exotoxin.

1 52. The isolated fusion protein of claim 51, wherein said *Pseudomonas*  
2 exotoxin is selected from the group consisting of PE38 and PE40.

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